

CUSTOMER NO.: 24498**Serial No. 10/584,686**

Response to Final Office Action dated 7/22/08

Response dated: 10/16/08

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defect in track direction. In addition, making a jump over this kind of defect region perpendicular to the track direction is disadvantageous, because a track having such a defect contains also readable data and therefore, scanning along the track is necessary to obtain at least the data in the track which are still readable. In case an abnormal region is extended to the whole track, for example a whole track which is mirrored, tracking can not be maintained. In this case, it is advantageous to jump over the abnormal region perpendicular to the track direction. However, these kind of abnormal regions are not addressed by Kühn.

In addition, Kühn does not determine the radial extension of the abnormal region perpendicular to a track direction as taught and claimed by the Applicant. In fact, Kühn checks if more than three error bursts h appear in five neighbouring tracks k and assumes a first type of error in this case. If three error bursts h are present in three neighbouring tracks k a second type of error is assumed (column 6, lines 55 – 61). Kühn makes a decision about the type of abnormal region after checking at most five neighbouring tracks. After having obtained the information about these five tracks, Kühn has acquired enough information for categorizing the abnormal region as belonging to the first type of error or belonging to the second type of error. For making such a decision, the whole radial extension of the abnormal region does not need to be checked. Kühn does not give any hint to check more than five neighbouring tracks k . In the case of a CD, the track pitch is $1.6 \mu\text{m}$. By checking at most five neighbouring tracks, Kühn checks a radial extension of $8 \mu\text{m}$, which is much less than a fingerprint width. Therefore, Kühn explicitly discloses to check a smaller number of tracks than being affected by the abnormal region and therefore, does not determine the radial extension of the abnormal region perpendicular to a track direction as taught and claimed by the Applicant.

To reiterate, the Applicant submits that Kuhn fails to teach, suggest or anticipate each and every element of at least the invention as recited in the Applicant's amended claim 1.

In contrast to the invention of the Applicant as claimed, the Applicant submits that Kühn discloses a finger print detection mechanism for detecting a type of defect of an optical recording medium. In Kuhn, a first type of defect is caused by a fingerprint and if this type of defect is detected, the user is informed (column 2, lines 38 – 46, column 6, lines 55 – 61). As a consequence, in case of the first type of defect, namely

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a fingerprint, the user is informed by means of a display (column 7, lines 15 - 21) and can remove the defect as a consequence by cleaning the disc. Kuhn, however, absolutely fails to teach, suggest or disclose **"making a jump over the abnormal region perpendicular to the track direction"** as taught in the Applicant's Specification and as claimed by at least the Applicant's claim 1.

In contrast to the invention of the Applicant, Kuhn discloses using data obtained during scanning along the track, that is to say, in parallel or in line with the track direction. Kuhn discloses in column 3, lines 11-13 that "the high frequency signal detected from the optical information medium ... can be used to determine at least one cause of error". Therefore, the Applicant submits that Kuhn proposes to scan along the track, because this is the case where a high frequency signal is present. While making a jump perpendicular to the track direction, no high frequency signal is present. The presence of a high frequency signal is also shown in FIG. 3 of Kuhn. As disclosed in column 7, lines 35-52, scratches and fingerprints lead to an attenuated high frequency signal, which might be below a given threshold value (W1, W2), but a high frequency signal is still present. Therefore, a jump perpendicular to the track direction is not disclosed by Kuhn.

Making a jump perpendicular to the track direction as taught and claimed by the Applicant's invention has the advantage that a valid track is found soon without scanning the whole invalid tracks. Further, in case a track is mirrored, the track guidance often can not be maintained and the track is lost during readout. Using a method according to the invention of the Applicant, a jump is made perpendicular to the erroneous track until a valid track region is found and guidance on this track can be maintained.

In addition, the Applicant submits that Kuhn does not determine the radial extension of the abnormal region perpendicular to a track direction. In fact, Kuhn checks if more than three error bursts appear in five neighbouring tracks and assumes a first type of error in this case. If three error bursts are present in three neighbouring tracks a second type of error is assumed (column 6, lines 55-61). Therefore, the whole radial extension of the abnormal region is not checked by Kuhn, because a decision is made after checking at most five neighbouring tracks. In case of a CD, the track pitch is 1.6 μm . By checking at most five neighbouring tracks, Kuhn checks a radial extension of 8 μm , which is much less than a fingerprint width. Therefore, the Applicant

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submits that Kuhn does not determine the radial extension of the abnormal region perpendicular to a track direction as taught by the Applicant's Specification and as claimed by at least the Applicant's claim 1.

Therefore, the Applicant submits that, for at least the reasons recited above, Kuhn fails to teach each and every element of the claimed invention, arranged as in the claim as required for anticipation. As such, the Applicant respectfully submits that the Applicant's amended claim 1 fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Furthermore, dependent claims 2-7, 9 and 12 and new claim 14 depend either directly or indirectly from independent claim 1 and recite additional features therefor. As such and for at least the reasons set forth herein, the Applicant submits that dependent claims 2-7, 9 and 12 and new claim 14 are also not anticipated by the teachings of Kuhn. More specifically, regarding new claim 14, the Applicant submits that Kuhn does not teach or suggest differentiation of errors in a group caused by physical defects and a group caused by erroneous data. The Applicant submits that it is advantageous to categorize abnormal regions as taught and claimed by the Applicant's claim 14, at least because in the case of an abnormal region caused by erroneous data, which is a wrong structure or wrong a wrong bitrate region, this type of abnormal region can be processed with a specific processing means.

Therefore, and for at least the reasons recited above, the Applicant submits that dependent claims 2-7, 9 and 12 and new claim 14 also fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

B. 35 U.S.C. § 103

The Examiner rejected the Applicant's claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Kuhn in view of Mitarai (JP 54048213). The rejection is respectfully traversed.

The Examiner applied Kuhn to the Applicant's claim 8 as applied for the rejection of the Applicant's claim 1. As described above, Kuhn absolutely fails to teach, suggest or anticipate at least the Applicant's claim 1. As such, and at least because Kuhn fails to teach, suggest or anticipate the Applicant's claim 1, the Applicant further submits that

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Kuhn also fails to teach, suggest or anticipate the Applicant's claim 8, which depends directly from the Applicant's claim 1.

Even further, the Applicant submits that the teachings of Mitarai absolutely fail to bridge the substantial gap between the teachings of Kuhn and the Applicant's invention, at least with respect to the Applicant's claims 1 and 8. That is, the Applicant submits that Mitarai absolutely fails to teach, suggest or anticipate at least a method for analyzing an abnormal region on an optical recording medium including "wherein the step of determining the type of the abnormal region includes **making a jump over the abnormal region perpendicular to the track direction** and obtaining information on the type of abnormal region during the jump" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1.

In contrast to the invention of the Applicant, Mitarai merely teaches storing the position and the radial extension of an abnormal region on an optical recording medium (i.e., stores the presence or not, quantity, length, position, etc. of the defect areas). However, as previously asserted, the Applicant submits that Mitarai absolutely fails to bridge the substantial gap between the teachings of Kuhn and the invention of the Applicant.

Therefore, the Applicant submits that for at least the reasons recited above the Applicant's independent claim 1 is not rendered obvious by the teachings of Kuhn and Mitarai, alone or in any allowable combination, and, as such, fully satisfies the requirements of 35 U.S.C. § 103 and is patentable thereunder. As such and at least because the teachings of Kuhn and Mitarai, alone or in any allowable combination, fail to render obvious the invention of the Applicant's claim 1, the Applicant further submits that dependent claim 8, which depends directly from the Applicant's claim 1, is also not rendered obvious by the teachings of Kuhn and Mitarai, alone or in any allowable combination, and, as such, fully satisfy the requirements of 35 U.S.C. § 103 and is patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

Conclusion

Thus the Applicant submits that none of the claims, presently in the application, are anticipated under the provisions of 35 U.S.C. § 102 or rendered obvious under the

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provisions of 35 U.S.C. § 103. Consequently, the Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.


If however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion, it is respectfully requested that the Examiner telephone the undersigned.

Please charge any unpaid, additional fees to Deposit Account No. 07-0832.

Respectfully submitted,

Peter Mahr

By:


Jorge Tony Villabon, Attorney
Reg. No. 52,322
(609) 734-6445

Patent Operations
Thomson Licensing Inc.
P.O. Box 5312
Princeton, New Jersey 08543-5312

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